described embodiments are to be considered merely exemplary and the invention is not to be limited thereby.

REFERENCES

- [0089] 1. Balakrishnan, R., G. Fitzmaurice, G. Kurtenbach and Singh, K. Exploring Interactive Curve and Surface Manipulation Using a Bend and Twist Sensitive Input Strip. In *Proceedings of the* 1999 Symposium on Interactive 3D graphics, ACM Press, 1999, pp. 111-118.
- [0090] 2. Fishkin, K., Gujar, A., Harrison, B., Moran, T. and Want, R. Embodied User Interfaces for Really Direct Manipulation. In *Communications of the ACM*, v. 43 n. 9, 2000, pp. 74-80.
- [0091] 3. Guimbretière, F. Paper Augmented Digital Documents. In *Proceedings of UIST* 2003. Vancouver: ACM Press, 2003, pp. 51-60.
- [0092] 4. Holman, D., Vertegaal, R., Troje, N. PaperWindows: Interaction Techniques for Digital Paper. In Proceedings of ACM CHI 2005 Conference on Human Factors in Computing Systems. Portland, Oreg.: ACM Press, 2005.
- [0093] 5. Ishii, H. and Ullmer, B. Tangible Bits: Towards Seamless Interfaces Between People, Bits and Atoms. In Proceedings of CHI 1997. Atlanta: ACM, 1997, pp. 234-241.
- [0094] 6. Johnson, W., Jellinek, H., Klotz, L., Rao, R. and Card S. Bridging the Paper and Electronic Worlds: The Paper User Interface. In *Proceedings of the INTERCHI* 1993. Amsterdam: ACM Press, 1993, pp. 507-512.
- [0095] 7. Ju, W. Bonanni, L., Fletcher, R., et al. Origami Desk: Integrating Technological Innovation and Humancentric Design. In *Proceedings of DIS* 2002. London: ACM Press, 2002, pp. 399-405.
- [0096] 8. Klemmer, S., Newman, M., Farrell, R., Bilezikjian, M. and Landay, J. The Designers' Outpost: A Tangible Interface for Collaborative Web Site Design. In *Proc.* of UIST 2001. Orlando: ACM Press, 2001, pp. 1-10.
- [0097] 9. Lange, B., Jones, M., and Meyers, J. Insight Lab: An Immersive Team Environment Linking Paper Displays and Data. In *Proceedings of CHI* 1998. Los Angeles: ACM Press, 1998, pp. 550-557.
- [0098] 10. Levine, S. R. and S. F. Ehrlich. The Freestyle System: A Design Perspective. In *Human-Machine Interactive Systems*, A. Klinger, Editor, 1991, pp. 3-21.
- [0099] 11. Mackay, W. E. & Fayard, A-L. Designing Interactive Paper: Lessons from Three Augmented Reality Projects. In *Proceedings of IWAR* '98, *International Work*shop on Augmented Reality. Natick, MA: A K Peters, Ltd., 1998.
- [0100] 12. Moran, T., Saund, E., Van Melle, W., Gujar, A., Fishkin, K. and Harrison, B. Design and Technology for Collaborage: Collaborative Collages of Information on Physical Walls. In *Proceedings of UIST* 1999. Asheville, N.C: ACM Press, 1999, pp. 197-206.
- [0101] 13. O'Hara, K. and Sellen, A. A Comparison of Reading Paper and On-line Documents. In *Proceedings of CHI* 1997. Atlanta: ACM Press, 1997, pp. 335-342.
- [0102] 14. Philips OLED Technology. http://www.business-sites.philips.com/mds/section-1131/
- [0103] 15. Piper, B., Ratti, C. and H. Ishii. Illuminating Clay: A 3-D Tangible Interface for Landscape Analysis In Proceedings of CHI 2002. Minneapolis: ACM Press, 2002.

- [0104] 16. Rekimoto, J. Pick-and-Drop: A Direct Manipulation Technique for Multiple Computer Environments. In *Proceedings of UIST* 1997. Banff: ACM Press, 1997, pp. 31-39.
- [0105] 17. Rekimoto, J. Ullmer, B. and H. Oba, DataTiles: A Modular Platform for Mixed Physical and Graphical Interactions. In *Proceedings of CHI* 2001. Seattle: ACM Press, 2001
- [0106] 18. Rekimoto, J. SmartSkin: An Infrastructure for Freehand Manipulation on Interactive Surfaces. In *Pro*ceedings of CHI 2002. Minneapolis: ACM Press, 2002, pp. 113-120.
- [0107] 19. Schilit, B., Golovchinsky, G., and Price, M. Beyond Paper: Supporting Active Reading with Free Form Digital Ink Annotations. In *Proceedings of CHI* 1998. Los Angeles: ACM Press, 1998, pp. 249-256.
- [0108] 20. Schwesig, C., Poupyrev, I., and Mori, E. Gummi: A Bendable Computer. In *Proceedings of CHI* 2004. Vienna: ACM Press, 2003, pp. 263-270.
- [0109] 21. Sellen, A., and Harper, R. The Myth of the Paperless Office, MIT Press, Cambridge, Mass., 2003.
- [0110] 22. Sun Starfire: A Video of Future Computing. http://www.asktog.com/starfire/starfirescript.html.
- [0111] 23. Vicon. http://www.vicon.com
- [0112] 24. Weiser, M. The Computer for the 21st Century. Scientific American, 1991, 265 (3), pp. 94-104.
- [0113] 25. Wellner, P. The DigitalDesk Calculator: Tangible Manipulation on a Desk Top Display. In *Proceedings of UIST* 1991. Hilton Head: ACM Press, 1991, pp. 27-33.

What is claimed is:

- 1. A method for capturing location, orientation and shape of one or more flexible display surface(s) comprising the steps of:
 - a) Determining the location in three dimensions of one or more Points within said flexible display surface(s);
 - b) Calculating a three dimensional model of the shape, orientation and location of said flexible display surface (s):
 - c) Clustering locations of Points and fitting curves through said measured locations of Points to determine the three dimensional model; and
 - d) Optionally determining the relative locations of Points such that the state of the shape or deformation of said flexible display surface(s) can be recognized.
- 2. The method of claim 1 wherein the flexible display surface is a three dimensional surface made of a material, selected from a group consisting of: paper, cardboard, paperlike materials, electronic paper, thin substrate displays, thinfilm substrate displays, flexible substrate displays, liquid crystal devices, liquid crystal diodes, light emitting devices, light emitting diodes, organic light emitting devices, stacked organic light emitting devices, transparent organic light emitting devices, polymer light emitting devices, organic light emitting diodes, stacked organic light emitting diodes, transparent organic light emitting diodes, polymer light emitting diodes, optical fibres, styrofoam, plastics, epoxy resin, textiles, e-textiles, clothing, skin of a living or dead human or other organism, body of a living or dead human or other organism, carbon-based materials and any three-dimensional object or model.
- 3. The method of claim 1 wherein a Point is a light reflective marker, embedded or otherwise affixed to said flexible display surface, and where the device for capturing three-